Amendments to the Specification:

Please replace the paragraph beginning at page 9, part [0029] with the following amended paragraph:

FIG. 2C illustrates a representative downstream voltage signal 40" provided by CMS sensor 40 as a function of time. In this case, the amplitude variation of downstream signal 40" is much greater than the variation of downstream signal 40' because the Cerium oxides in the catalyst 36 has ~~be~~ been highly oxidized and no longer "absorbs" (i.e., reacts with) oxygen in the exhaust fed to the catalyst. Thus, the arc length ratio described in U. S. Patent No. 5,899,062 is nearly unity. Detection of this nearly unity arc length ratio while indicating that the Cerium oxides are no longer effective in reducing emissions, does not provide any indication as to whether the precious metals in the catalyst 36 are effective in reducing emissions to within governmental regulations.

Please replace the paragraph beginning at page 9, part [0031] with the following amended paragraph:

More particularly, referring to FIGS. 2A-2C as noted above FIG. 2B shows the voltage produced by the downstream sensor 40 after the ~~Ceruin~~ Cerium has lost its effectiveness. Under such condition, there is a reduction in the time delay between the signals produced by the upstream and downstream sensors. Applicants have measured the time delay between such upstream and downstream signal using a new, or green catalyst "poisoned" by phosphorous to remove any emission removal effectiveness of the Cerium oxides. Applicants have determined that this green, or new catalyst is still able to reduce emissions to acceptable levels because of the precious metals in the catalyst. They first measure the time delay of the green but poisoned catalyst. After many additional hours of use, this now aged catalyst has its emission reduction effectiveness measured along with the time delay between the upstream and downstream sensor 38, 40 output signal. The process continued until the catalyst is no longer effective, i.e., the precious metals have lost their

effectiveness in removing emissions such that the catalyst no longer met governmental requirement. At this time, the time delay τ, between the upstream and downstream sensors 38, 40 is measured. This measured time delay τ becomes a measure of a minimum time delay threshold such that if the actual time delay of a catalyst falls below this level τ, the catalyst is deemed to be ineffective and the MIL is activated.

Please replace the paragraph beginning at page 10, part [0032] with the following amended paragraph:

The time delay may be determined a number of different ways. Here, a determination is made by measuring the time delay between: (1) the time the upstream exhaust gas oxygen sensor 38 voltage output, shown by curve 50, passes through a reference level, or setpoint, here 0.45 during transitions from a lean air fuel ratio to a rich air fuel ratio, e.g., at times tA, tB in FIG. 3; and, (2) the time the downstream exhaust gas oxygen sensor 40 voltage output, shown by curve 52, passes through the same reference level, or setpoint, here 0.45, during transitions from a lean air fuel ratio to a rich air fuel ratio, e.g., at times tC, tD in FIG. 3. Thus, the lean to rich time delay between tA and tD is a measure of τ. Likewise a succeeding rich to lean measure of τ is the time between tB and ~~tD~~ tC.

Please replace the paragraph beginning at page 10, part [0037] with the following amended paragraph:

It is noted that there is less measurement deviation when using the time delay measurements between during lean to rich transitions of the upstream and downstream oxygen sensors, curve 70, than that using the time delay measurements between rich to lean transitions, curve 72. Further, there are statistically less MIL indications less when using the time delay measurements between during lean to ~~lean~~ rich transitions of the upstream and downstream oxygen sensors, curve 70, than that using the time delay measurements between rich to ~~rich~~ lean transitions, curve 72.